

WHAT IS CLAIMED IS:

1. A system for removing material buildup from interior walls of a device that produces integrated circuit structures on semiconductor wafers, the device having a chamber for placing the semiconductor wafers, the chamber
5 environmentally coupled to a gas source through a gaseous flow path, the system comprising:

a heat source, interposed in the gaseous flow path upstream of the chamber, that heats the gas flowing from the gas supply; and

the heated gas placing the atmosphere in at least part of the device at a
10 point where sublimation or evaporation of the material will occur.

2. A process for removing deposited material from a device, the device having interior walls upon which material is deposited, the device suitable for use in production of integrated circuit structures on semiconductor wafers, the
15 process comprising the steps of:

creating a flow of gas through said device from a first point in the device; through an exit spaced from said first point in the device, the flow of gas creating an atmospheric pressure of about 100 Torr to normal atmosphere in the device;

heating the gas flowing through the device;

20 sublimating or evaporating, based on the combination of the heating and the atmospheric pressure, the deposited material from the surface of the interior wall in the device into a gaseous material; and

removing the gaseous material from the device with the gaseous flow.

25 3. The process of claim 2 wherein the step of heating is accomplished with a resistive heater.

4. The process of claim 2, the device comprising a chamber, and wherein the step of sublimating or evaporating is directed at deposited material in the
30 chamber.

00943559-000001
100000-000000

5. The process of claim 2, the device comprising a purge element, and wherein the step of sublimating or evaporating is directed at deposited material in the purge element.

5

6. The process of claim 2, wherein the gas is an inert gas.

7. The process of claim 6, wherein the inert gas is nitrogen.

10 8. A process for removing deposited material from a device suitable for use in production of integrated circuit structures on semiconductor wafers, the device having interior walls upon which material is deposited, the process comprising the steps of:

15 changing the material deposited on the interior walls of the device into a gaseous material; and
removing the gaseous material from the device with a gaseous flow.

20 9. A process for cleaning deposited material off of interior walls of a production device used in the production of semiconductor devices, the process comprising the steps of:

changing the material deposited on the interior walls of the device into a gaseous material; and
removing the gaseous material from the device with a gaseous flow.

25 10. A process for running a production device used in the production of semiconductor devices, the production device maintaining an internal environment sealed from an external environment when producing a batch of semiconductor devices, the production device creating material that is deposited on interior walls of the production device when producing a batch of
30 semiconductor devices, the process comprising the steps of:

00943569-083004

- producing a batch of semiconductor devices;
prior to unsealing the production device to the external environment,
changing the material deposited on the interior walls of the device into a gaseous
material; and
- 5 concurrently with the step of changing, removing the gaseous material
from the device with a gaseous flow.

0942569 083001
T00E80 6952460